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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,765	02/10/2004	Frederick P. Herrmann	0717.2041-001	8724
21005 7590 11/28/2007 HAMILTON, BROOK, SMITH & REYNOLDS, P.C. 530 VIRGINIA ROAD P.O. BOX 9133 CONCORD, MA 01742-9133			EXAMINER FATAHI YAR, MAHMOUD	
			ART UNIT 2629	PAPER NUMBER
			MAIL DATE 11/28/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/775,765

Applicant(s)

HERRMANN, FREDERICK P.

Examiner

Mike Fatahiyar

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 10 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edwards et al(2002/0054005A1) in view of Skine(2003/0146896A1).

Edwards et al disclose a method driving a liquid crystal display device comprising a data bus(26, 27), a row buffer(21, 25) and a switch network(31A, 31B, 31C) coupled to the row buffer. Edwards et al substantially teaches all the feature of the above claims except for the "converting of the digital data to analog data using column load capacitances on a pair of column lines of the LCD". However, Sekine is cited to show that the concept of converting digital data to analog data using column load capacitances on pairs of column lines of the LCD(see the abstract; paragraphs [0016] and [0054]). Thus, it would have been obvious to one of ordinary skill in the art to modify the system of Edwards et al with the above noted teachings of Skine such that to utilize column load capacitances on pairs of column lines of the LCD for the conversion of the digital data to analog data because both references are related to driving of an LCD display device and further because it is desirable to eliminate the need for specific switched capacitor for the conversion.

3. Claims 2-8 and 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edwards et al and Sekine as applied to claims 1 and 10 above, and further in view of Janssen et al(2002/0135557A1).

Edwards et al and Sekine are discussed above. Janssen et al is cited to show that the concept of connecting a switching device(74) to adjacent respective pair of column lines(80A, 80B) of an LCD(figure 3) and wherein a first column of the pair of column lines is coupled to alternating pixels of the first column line is old. Thus, it would have been obvious to one of ordinary skill in the art to apply the above noted teachings of Janssen et al to the modified LCD system of Edwards et al such that a switching device would be coupled to an adjacent respective pair of column lines of the LCD and wherein the first column of the pair of column lines is coupled to alternating pixels of the first column because all the references are directed to column driving of an LCD display device with digital video signals and reduction of column capacitances.

In claims 3-6 and 12-15, as to the limitations "at least three MOSFETs of n-channels or p-channels or a combination of n-channel and p-channel are also shown to old by Edwards et al(see [0024] and [0025]).

In claims 8 and 17, as to the limitation "the pixels are arranged in a rectangular layout for a black and white display, such is also true in the system of Edwards et al(see figure 1).

4. Claims 9 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edwards et al, Sekine and Janssen et al as applied to claims 7 and 16 above, and further in view of Hashimoto(5,619,225).

Edwards et al, Sekine and Janssen et al are discussed above. Hashimoto is cited to show the concept of utilizing a delta layout pixels arrangement is old(see figures 5 and 10). Thus, it would have been obvious to one of ordinary skill in the art to apply the noted teachings of Hashimoto to the modified system of a Edwards et al in order to provide a delta layout pixels arrangement because it desirable to drive a color LCD panel and further because the delta layout pixels arrangement is a conventional layout arrangement for color LCD panels.

5. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Fatahiyar whose telephone number is (571)272-7688. The examiner can normally be reached on Monday-Friday from 9:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).


AMARE MENGISTU
SUPERVISORY PATENT EXAMINER


M. Fatahiyar

November 26, 2007